The Importance of PRESERVING THE TEETH.

Thos. L. Sydnor, D.D.S.

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THE

Importance of Preserving

—THE—

ALSO A TREATISE ON

Dental Ethnography,

From which is deduced some thoughts upon the Physiological and Physiognomical Indications of the Teeth.

—BY—

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TO THE

CITIZENS OF DANVILLE

AND VICINITY,

In grateful appreciation of their confidence and very liberal patronage,

THIS BOOK

Is respectfully inscribed.

"Procrastination is the thief of time."
And also steals the hapless teeth away.

1879

PREFACE.

—:o:—

IN preparing this little volume for the perusal of the public, I have endeavored, as far as practicable, to exclude all technical terms, to avoid all superfluous phrases, and to make the treatise, in all its bearings, thoroughly practical.

The number of solicitous inquries, continually coming up from intelligent persons, evidences the fact, that there is great want of popular information, concerning the requirements of the teeth, the necessity of proper and timely attention, and the kind of attention, which their peculiar structure and surrounding conditions demand.

While excluding all that which is merely theoretical, or of only professional interest; I have endeavored to

condense into a very few pages, such matter as will commend itself to the interest, as well as the understanding of the general reader. I have attempted to make the subjects discussed, as varied and complete, as the limited space will admit, and to so arrange them, as to make a convenient form of Hand-book of Dental Hygiene.

The teeth of the people of the United States are more liable to disease, than those of any other nation, and it is only by a rigid adherence to hygienic rules, that they can be preserved; while on the other hand, many of the uncivilized nations, having almost perfect teeth, are as indifferent to any such attention, as are the animals of the brute creation. Ours is a dainty people, and our fastideous tastes, and delicate habits of life, make us more liable to phy-

sical disorders than the plainer livers. No part of the body suffers so sadly under the distortions of nature's simple regimen, as do the teeth. It is proposed, in these few pages, to show why this is true, and to awaken the reader to the importance of timely attention to those priceless members, which stand in such vital relation to the whole organism; for, be it remembered, that not only are the teeth affected by the general health; but they thrmselves, when in an abnormal condition, are the cause of very many and various disorders.

Danville, Va., November, 1879.

CONTENTS.

X.

THE TEETH.

The position occupied by the teeth, in the arrangement of the physical economy, assigns to them very important functions.

Their proper arrangement is necessary to perfect enunciation. They add to or detract from the beauty of the face. Besides being symptomatic of certain innate diseases, they are, to a great extent, an index to character.

We readily understand, that without thorough mastication, perfect digestion is impossible. Indigestion means Dyspepsia—Dyspepsia means poison at the fountain head, and while it may exist for months, without exciting uneasiness, or seeming to demand attention, with no other symptons than occasional un-

pleasant eructations, or slight head-ache; the poisonous condition of the digestive fluids continues its ravages upon the system, until we find the appetite irregular, nauseating taste in the mouth, heart-burn, biliousness, dull, heavy head-ache and a long list of nervous symptoms, and other disagreeable concomitants. So then, we find that the health of the system depends upon, not only, what is eaten, but how it is eaten. The teeth stand at the beginning of the digestive tract, and in their perfect state, are most admirably adapted to the performance of their duty of masticating or triturating, grinding the food for the absorbents. But, the system demands more for its existence than well masticated food—Besides from two to five pounds of solid and liquid material, taken into the mouth, the lungs extract

from the air daily, two or more pounds of oxygen, which is taken up by the blood, and carried to every part of the body. Let us remember now, that a very large proportion of this oxygen comes in contact with the teeth before entering the lungs, and if the teeth are in an uncleanly or decayed condition, or the gums are unhealthy; the atmosphere breathed is continually vitiated by such contact, and a poisoned air is presented to the circulation. Thus, we see that diseased or neglected teeth may effect the general health more immediately through the lungs, than through the digestive channel. Impurities in the lungs are in immediate contact with the circulation; while impurities in the stomach, have to go through a longer process of absorption, before they effect the system Impurities in the stomach can be

reached by medicines, which may counteract their evil tendencies; but impure air in the lungs has already been transmitted to the blood, and deposited in the tissues.

Persons possessing innately strong constitutions, and whose habits of life keep them much in the open air, may resist for many years any perceptible impairment of health from diseased teeth or gums; but the systems, particularly, of lymphatic, scrofulous or lymphatico-serous temperaments, or of persons of consumptive diathesis, are often so permeated by the continuous supply of morbid matter, furnished from diseased teeth or suppurating gums, that no medicine or skill of the physician can effect a cure of the disease, which may be under treatment. And, unfortunately for the teeth, when the tone of the system becomes impaired,

by long continued or chronic diseases, the very medicines which are demanded for the building up of the system, are those most hurtful to the teeth. The preparations of iron, the most common tonics are certain destruction to tooth substance ; if brought in contact with it. The truth of this can easily be tested, by placing a tooth into a solution of muriated tincture of iron, when it will be found, that the enamel of the tooth will in a few hours be entirely decomposed. Either acetic* or citric† acid will destroy the the texture of a tooth in forty-eight hours. Malic acid‡ is also very destructive. We often feel the effects of these acids after eating pickle, sour apples or lemons. The most destructive agents, which are in com-

*Vinegar. †Lemon. ‡Apple Juice.

mon use as tonics, are the muriatic, sulphuric and nitric acids. Always, after the use of these medicines, or their compounds, the patient should be very careful to rinse the mouth, thoroughly, with limewater, or carbonate of potash, or soda. The teeth may also be protected, to some extent, by taking these medicines through a tube

It is often said of children, whose teeth are defective, that they have "lived on sugar, hence their teeth have been ruined." Pure sugar has no effect upon the teeth, until it remains in the mouth long enough to form an acetous acid; so that, if, after eating sugar, the mouth is thoroughly rinsed with water, no effect will be felt upon the teeth. It is true that sugar often gives pain in the teeth, but, only, when the tooth is already very much decayed, and the

lost enamel has exposed the sensitive dentine. We may state just here, that one of the most destructive agents is simple bread: we say most destructive, because, in neglected mouths, it is an ever present one, being allowed to remain between the teeth from one meal to another: thus giving time to ferment, and become acetic. Any of the vegetable substances, which are liable to acetic fermentation, are conducive of decay when allowed to remain between the teeth. Animal food, meat of any kind, when free from condiments, has little or no effect upon the teeth, even, though, it be permitted to remain long in contact with them.

Thus far, we have noticed only such agents as act immediately upon tooth substance, when placed in the mouth. The more universal cause of caries of the teeth, is from an ab-

normal or vitiated condition of the mucous and salivary fluids, which are secreted in the system, and poured into the mouth through the ducts, at the rate of from two to three pints per day. These fluids are essential lubricants for the mouth, and necessary to proper digestion. In their normal, healthy state, they have no evil effect upon the teeth; but the various conditions of the system, from causes already mentioned, may so alter their nature, as to make them very corrosive, and the teeth become almost inevitably victims. We then find the tooth substance yielding at the weakest points, and the only recourse now, is removal of the affected part, and renewal of the lost portion, with an impervious filling. Let it be remembered, just here, that *when decay has once begun, and made its way through the enamel,*

unless stopped by a proper filling, it will certainly continue its ravages until the nerve cavity is reached, and all the horrors of tooth-ache are experienced. The longer the treatment is postponed, the more difficult becomes the operation, and the more doubtful the results. The proper time to treat disease is in its incipiency. Never wait for pain to notify you of its presence; lest when forced to seek relief, the dentist is obliged to extract the tooth instead of saving it by the insertion of a simple, painless filling. When the teeth are very much crowded, the proximate surfaces are very liable to decay. And it often happens that caries exists to a dangerous extent, before there is any perceptible indication of disease. So that while the teeth may SEEM to be perfect, an occasional visit to a competent den-

tist may prevent the loss of two or more teeth: for decay on one tooth, is almost always contagious when in contact with another tooth.

Teeth never decay from within. Caries always attacks the surface, and makes its way inward. This being true, we can readily understand, that *if the teeth are kept perfectly clean, and free from corrosive agents, they cannot decay.* We also understand, why it is, that decay exists in the mouths of persons who have been habitually careful in the use of the brush, after each meal: since we find that the fluids of the mouth, which are continually present, are often in a corrosive condition. These fluids act slowly, when there are no food particles with which to combine; but when we find these two evils, neglect, and vitiated saliva combined, no class of teeth can resist the ravaging

effects, and the mouth becomes painfully repulsive. Instead of regularly festooned, healthy colored gums, we find them turgid and swollen. Instead of a regular arch of glossy, well shapen teeth, the lips expose a distorted, fragmentary set, exhaling instead of a sweet, inviting breath, a repulsive odor, of which the owner may well manifest shame, by hiding with the hand, that which ought to be the most attractive feature. What is more attractive or winsome, in a beautiful face, than a hearty laugh, freely exposing a double row of beautiful pearls? And yet, such teeth among our American people are so rare, that when seen, we are disposed to question, their genuineness. This ought not so to be.

The questions, which ought to interest our people now, are: Why is it thus with our teeth? And why is it

that the grand-parents' teeth are often better than those of the children ?

Before attempting, however, to answer these questions, we will have something to say about the formation and effect of tartar upon the teeth. Tartar, or salivary calculus, is a deposit, more or less hard, which is formed around the necks of the teeth and sometimes extending over the entire crowns, always insinuating itself, to a greater or less extent, under the gums. We need not here speak of the different varieties of this deposit. Sometines the saliva is in such a condition, that the utmost care will not prevent calculi formations. When the deposit has become callous, it adheres very closely to the teeth, and cannot be removed with the brush. Each deposit presents a rough surface, and invites a still larger accumulation. The inner gums

of the lower front teeth, and the buccal (outer) necks of the upper molars are the points most liable to its attacks. When it accumulates in large quantities, it is very offensive, and under the microscope, is found to be infested with multitudes of minute infusoria. Generally, it has no effect upon the teeth, but irritates the gums, and makes them spongy, turgid, and liable to bleed upon the slightest touch. By insinuating itself under the gums, it destroys the thin plate of bone around the necks of the teeth, together with the periosteal connection around the roots: thus loosening the teeth to such an extent, that they themselves become irritants, and are worse than useless. Here, again, we find, alas! too often, that the teeth have fallen victims to medicines applied as remedies for systemic diseases. Sometimes, it is neccessary,

in the treatment of diseases, to use mercurial preparations, to such an extent, as to induce profuse salivation. Sometimes, criminal ignorance of the effect to be produced by medicines used, results in the loss of whole sets of perfectly sound teeth. When mercurial salivation has been thoroughly established, and manifested itself in the gums, there is no remedy. The teeth must, inevitably, be lost, or continue to be a source of annoyance and irritation. In this condition, the sooner they are removed, the better for the general health of the patient. The use of mercury or other sialagogues, however, is not the only cause of diseased gums and tartar formation. Neglect, particularly, during protracted sickness, permits and encourages tartar accumulations. It is often found, also, upon the teeth of persons, who

seem to be in perfect health, who have never known sickness. This is particularly true, among persons who are overworked, either mentally or physically, who keep late hours, or whose business keeps them in rooms improperly ventilated, or from which the sunlight is excluded. Persons thus occupied have no time to attend to their teeth, and in their almost perfect state of health, are not reminded that any part of their body requires special attention, until the gradual, but persistent accumulation has made its effects felt upon the general health, and even then may continue to exist as the real, but unsuspected, cause of a chronic, disordered condition of the system.

While it is true that tartar exists in large quantites in the mouths of persons who are never in the hands of the physician: it is rlso true, that

physicians are often disappointed in their prognosis of diseases, because they have failed to make an intelligent examination of the teeth and gums of their patient. It has become so habitual for the tongue to be consulted as a pathognomic, that, upon the approach of the physician it is protruded, almost involuntarily. Its condition does often determine the immediate treatment within the province of the physician: while the tongue itself, in the very act of being protruded, may have concealed the true aetiology of all the malignant symptoms. By all means, apply to the dentist, first, for the removal of the offending element, and then he will prescribe a dentifrice or detergent mouthwash, which will guard against a recurrence of the trouble. Systemic treatment, if necessary, may then be instituted with success.

We revert, now, to the questions so often asked by the anxious parent—Why do my children suffer so much with their teeth, when my grandfather used to say that he never had tooth-ache nor ever visited the dentist? Why it is that these children's teeth are crowded, or misplaced and crooked, while some plain old man has almost a perfect arch? These are questions which puzzle our American people. We answer them in these words :—Civilization, Changed habit of life, and Artificial diet. Civilization always carries with it a certain amount of artificial living. During the palmy days of Greece and Rome, when a high state of civilization, combined with wealth and affluence, inducing luxury. ease and slothful inactivity, it became necessary to make the treatment of the teeth a seperate branch of medicine. The

whole history of dentistry will show, that just in proportion as the habits of life become artificial: just so do the teeth degenerate from their natural state of perfection.

We find, also, that certain conditions of the teeth are the result of heredity: just as are various innate constitutional diseases. But, it is also true, that parents who have almost perfect teeth, are often surprised to find that their children's teeth are irregular and defective. These teeth then, are the heritage of the habit of life, or the physical condition of the parent, rather than any peculiar influence brought to bear upon the child in after life. In other words, the texture of the child's teeth, very largely depends upon the diet, and general mode of life of the child's mother. This will be readily understood, when we remember that the

enamel of many of the teeth is formed in very early infancy, and when once formed, its consistency can never be changed. The development of the teeth is one of the most interesting studies in all the history of human physiology; but of course does not come within the province of the general reader. From what has been said, however, the reader is prepared to receive this statement, *i. e.* The condition of the whole temporary or first set of teeth is dependent, almost entirely, upon the diet and habit of life of the parent, as also are the permanent incisors and cuspids, the six front teeth in either jaw; the crowns of these having begun to form, even before the first teeth are erupted, or cut. The bicuspids and large molars, being formed later in life, are more dependent upon the habit and health of the individual. We find now, that

the *liability* or *predisposition* of the teeth to decay, is determined, before they have shown themselves through the gums. We also see why, that in one person, one class of teeth tend to decay, while in another person, other teeth are imperfect: or why one class of teeth may be perfect, while in the same mouth, another class may be very defective.—Let us demonstrate: The six front teeth may be perfect as the result of conditions already mentioned. The defective condition of the next two, on either side, may be attributed to improper supply of nutritive material for tooth substance during the period of their dentinification, which is generally about the fifth to seventh year. The sixth-year molar, although a permanent tooth, is apt to partake of the nature of the first set; it being formed very early in life, and usually

makes its appearance before any of the first teeth are lost. Under favorable conditions during the sixth to eighth year, a strong, well shaped second molar will be formed within the gum, and will show itself at about twelve years of age. If this favorable condition of health and other surroundings continues through the twelfth and thirteenth years; the wisdom tooth, will in due time be found hard, and often very servicable. If the child has been the subject of cutaneous diseases, before reaching the seventh or eighth year; the fact is almost sure to be registered upon the teeth, and the intelligent dentist can generally infer, with considerable degree of accuracy, the age at which the little patient was a sufferer. Just in proportion, as the disease has been confluent, severe or protracted: so is the register upon the teeth well defined, and deeply

marked, and so remains through life, or rather, through the tooth's existence.

Now we propose to show how the *teeth of future generations* may be made better than those of the present, and more like those of the "olden time."—Simply by returning to the primitive modes of life—Squalid poverty is not conducive to good teeth, any more than is luxury and intemperance. There is a happy mean, which nature's God has prescribed for all his creation. When we depart from this simple and economical arrangement, we suffer the consequences. Let us examine, first, the requirements of the teeth, and then we will see how perfectly, nature has supplied all the demands. Teeth, as we find them, in their present degenerated state, vary, very much, in

their analysis; but a perfect tooth may be said to be composed of

Phosphate of Lime with slight traces of Fluoride of Calcium, about.....68 parts.
Carbonate of Lime..... .....3 "
Cartilage.....28 "
Soluble Salts in small quantity and a little Fat.

We see from the analysis that Phosphate of Lime is a very important ingredient, and when we examine the enamel portion, seperately, we find that nearly nine-tenths of it is Phosphate of Lime. This, then, is the ingredient needed by the system to make a tooth crown; which will best serve the purpose for which it is intended. The potter cannot make the vessel without the clay, nor can the animal system make the tissues, without proper material. Examine the food, which nature has so bountifully supplied, for the maintenance of the various tissues of the body. Here, we have an inviting field ; but

lest the extended analysis of various articles of diet should smack too much of science, and involve too much of technology; we will examine only some of the cereals, which constitute the larger proportion of our daily supply, entering largely into the luxuries of the table, as well as constituting that which is known, as the "staff of life."

In unbolted flour, there is about fifteen per cent. of material, which may be transformed into muscle, twenty-five per cent. of fat-producing material, and nearly eleven per cent of material for the formation of bones and teeth. Now we find, that art, so hostile to the health of man, has expended in the United States, more than one million, four hundred thousand dollars, in appliances for the removal of the very ingredient which is necessary for the construc-

tion of strong bones and good teeth. This interference of art leaves about 13 per cent. of muscle making material, 2 per cent. of fat, and 6, instead of 11 per cent. for bones and teeth. The bran, thus destroyed by these bolting machines, contains about 70 per cent. of material which should be used for the formation and maintenance of the hard tissues. Here, as ever, we find nature so much wiser, and more provident than the arts of man. The people of olden times, willingly accepted nature's allotment, and reaped the benefits of a healthy regimen ; but the fastidious demands of this dainty age, ignoring this plain and careless mode of life, have fallen into egregious error, upon the other extreme. They reject a most valuable ingredient of nutrition, as unclean, and trample under foot, the elements of

a good constitution: thus leaving the system in a state of deficiency. Not until we have returned to this primitive, and natural diet and habit, can we expect to attain to that constitutional vigor, now so rare among our American people. Since we cannot expect this, so long as the present standard of civilization exists we need not look for perfect teeth; but, accepting the fact of their defectiveness, we treat the disease as it exists, with but little hope of stopping the tide of inevitable degeneracy.

Pure, rich milk is the only, single article of food, which contains all the ingredients demanded for a healthy body, and should constitute the chief element of food for children. Infants, under ten months old, should be fed upon nothing else. Well boiled oatmeal, rice, eggs, bread-crumbs from coarse flour, and

gravy, make a good diet for children, after being weaned; but milk should still be used freely, until the child is four or five years of age, and if continued throughout life, to the exclusion of tea and coffee, old age will reap the benefit.

It is a popular opinion, that very warm food is injurious to the teeth. No amount of heat that can be taken into the mouth, *without pain*, can possibly injure the teeth. Very hot, or extremely cold draughts, carried suddenly to the stomach, may so injure the membrane, as to impair its digestive functions, thus causing dyspepsia, the effect of which, upon the teeth, has already been noticed. Transient pain in the teeth, induced by moderate heat or cold, generally indicates disease, and an early visit to the dentist may save the tooth, and rescue the patient from protracted

suffering. The visit to the dentist should never be compulsory; that is, never wait until driven to the office by throbbing pain. Tooth-ache is generally followed by loss of the tooth. Such tooth may sometimes be filled, but there is generally more or less doubt about the success of the operation. Teeth are sometimes decayed beyond the skill of the dentist to reclaim, without having given any painful indications of existing decay. And yet, as has been already stated, decay always begins on the outside, and its existence will be readily detected by a careful examination.

Irregularity of the Teeth.

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By irregularity, we mean a distorted position occupied by the teeth, making a deformed arch. We often hear such deformity spoken of, as crooked teeth. This is generally a misnomer. They may vary greatly in size, and are *occasionally* crooked or malshapen; but very rarely, do we find a really crooked tooth. And very fortunate it is, that this is true, since it is very difficult to change its shape, without injury, when the tooth itself is malformed: while on the other hand, under favorable conditions, it is within the power of the skillful dentist, to correct almost any extent of irregularity, resulting from misplaced teeth. The large molars, (jaw teeth) seldom deviate

from their proper position. The biscupids are occasionally irregular. The six front teeth, upper and lower, very often occupy irregular positions, sometimes producing such deformity as to entirely destroy the contour of the lower part of the face, so distorting the features, as to give an expression, utterly at variance with the true character of the person. This condition is often allowed to exist, because it is not known that there is any remedy, except the extraction of the offending front teeth. But, notwithstanding the great variety of deformity, to which these six teeth are liable : it is very rarely the case, that their extraction is necessary. The extent to which these single-rooted teeth can be moved, without injury or pain, makes it practicable to bring them into proper position, even when such change has been

considered an impossibility. I might here cite a number of very interesting cases which have occurred in my own practice, resulting in perfect success, to the great delight and surprise of patients, and their friends. It is sometimes necessary to extract some of the less important teeth, to make room for those in front, and unless they have already become very much decayed, the front teeth can be retained. In the treatment, however, of irregularity, there is always some limitation of success, resulting from the age of the subject to be treated. A crowded or irregularly shaped arch is very conducive of decay, and early loss of the teeth; but if the teeth have remained until the age of thirty, it is very difficult to correct the deformity. The same condition is somewhat difficult, when over twenty years old:

while probally the best results are obtainable between the ages of eleven and sixteen. In many cases, treatment should be instituted very much earlier. Parents, whose children have irregular teeth, should remember this: that so long as the teeth are permitted to remain in this condition, the deformity is increasing, and also, that the older the person becomes, the more difficult the remedy. The best time to begin the treatment, is just as soon as the child is old enough to appreciate its importance. But, again, if the parents have been faithful to their little charge, before this time, the necessity for such treatment may often be prevented. This brings us, now, to speak of the treatment of the First teeth, and some of the causes of irregularity of the Second Set.

Temporary or First Teeth.

—o—

DURING the eruptive period, the little infant is very apt to be fretful, and subject to various physical disorders. Sometimes cutaneous eruptions infest the body, but particularly, the scalp. Sometimes the pain resulting from the erupting tooth is so intense as to cause convulsions. Ignorant nurses, and sometimes mothers, rudely larcerate the gums, by rubbing them with a key or thimble, until the cusps of the teeth are exposed: when, sure enough, the child is relieved. When the eruption is very difficult, a free incision should be made with a sharp lancet, which will give instantaneous relief, and is far preferable to the rude thimble. It is true, that even the thimble is not very painful,

since, the gums are less sensitive to pain, than any part of the body; but it is often necessary to use the lancet, for a very deep incission, before there is any very decided local manifestation of the erupting tooth. This is readily appreciated, when we understand that the pain, from which the little infant suffers, is not caused by the pressure of the crown against the gum; but the outer membrane of the gum, being very tough, refuses to yield to the absorbing action of the enclosed crown, and the root of the tooth is made to press against the nerve, within the bone. The origin of this nerve is just behind the eye, and near the ear; hence, we account for the fact, that the "teething" child often pulls its ear, and scratches the side of its face, in great agony. I would not unnecessarily alarm anxious parents, for the safety of their

children at this period; but, while it is well known, that more deaths occur during this stage, than any other period of life: it is not so generally understood, that the inflammation, resulting from difficult dentition, may extend to the auditory nerve, and result in deafness. When inflammation has reached this far, it is very apt to extend to the brain, and result in death. There can be little doubt, but that difficult dentition is, often, the unsuspected cause of the lost hearing, which the fond parent is suddenly called to witness, in her, once, sprightly babe.

The first, or Deciduous Teeth, sometimes called Temporary, are intended to subserve the purposes of childhood, and remain until, by a certain process of the economy they are thrown off and replaced by others, which are larger and of firmer text-

ure. They are twenty in number, ten in each jaw, and usually make their appearance in the order noticed in the accompanying cuts. The lower generally preceed the upper by a few weeks.

Figure 1, illustrates the upper set of Temporary or Deciduous Teeth, known by the following names :

2 Central Incisors, Nos. 1, in cut, erupt between 5th and 8th months.
2 Lateral Incisors, Nos. 2, in cut, erupt between 7th and 10th months.
2 Molars, Nos. 3, in cut, erupt between 12th and 16th months.
2 Canines, or Eye Teeth, Nos. 4, in cut, erupt between 14th and 20th months
2 Large Molars, Nos. 5, in cut, erupt between 20th and 36th months.

Figure 2, gives a side view of the child's lower jaw.

The teeth marked No. 6, and called six-year molars, do not belong to the temporary set; but, since they make their appearance before any of the first are lost, they have been in-

Figure 1.

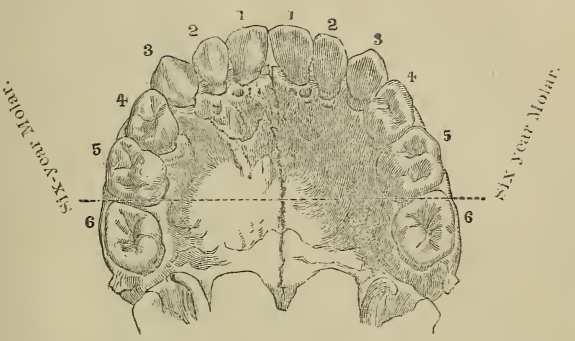
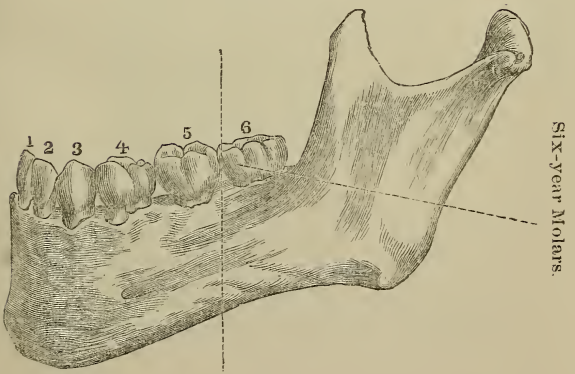


Figure 2.



cluded in the cuts, and will be noticed elsewhere.

The time of eruption, as given in the table, is by no means without exceptions. Sometimes they appear earlier, and often very much later. Occasionally, one, two or more, are present at birth ; but they are generally without roots, and are soon thrown off. Early teeth are supposed, by wiseacres, to indicate a brilliant life, and for the benefit of parents, whose young hopefuls have, thus early, aspired to future greatness, it may be stated, that Napolean Bonaparte, on his birthday, was the owner of two "sweet little white toofies."

Before the first, or temporary teeth have made their appearance through the gums, the crowns of some of the corresponding permanent teeth have already begun to form, deep down in

the jaw, and very soon begin a process of destruction of the temporary teeth; so that, when the proper time has arrived for the appearance of the permanent teeth, the roots of the first have been entirely absorbed, and the crowns fall off, or are removed without pain or difficulty. This is nature's arrangement, and, unless there is some constitutional disorder, or accidental interference, the loss and replacement is perfectly normal and easy.

Opium retards the eruption of the teeth. It is one of nature's most direful enemies, and would that Mr. John Chinaman had kept his loathsome drug ever beneath our feet. The ever watchful mother looks in vain for her little infant's teeth, and wondering at their non-appearance, never suspects for a moment, that the ever present vials of laudanum

and paregoric, have been the cause of their tardiness.

Nations, whose habits are simple, and whose customs are decided by nature, instead of fastidious self-destroying fashion, are almost entirely free from the serious troubles, which this period brings to our people, who would fain ignore nature's provisions. Notwithstanding, the popular opinion, that the first teeth are of little, or no importance; there are several very potent reasons, why they should be preserved, just so long, and no longer, than certain physical conditions indicate. First, if they are allowed to decay, and become tender, or are extracted, the child cannot properly masticate its food, and thereby injures its health, while the habit of bolting, becomes so fixed, that it is not easily broken. Second, if the

tooth is removed, before the corresponding permanent tooth is ready to take its place, the gum heals and becomes very hard, and it is difficult for the tooth to make its way through. At the same time, also, the adjoining teeth infringe upon the space, and when the time has arrived for the permanent tooth to erupt, it is forced to take a wrong position. Now then, we have found one of tbe causes of irregularity. Again—if the permanent tooth has been premature in presenting itself, or the absorption of the roots of the first has been tardy, then, also, the permanent tooth is pushed out of its normal position, and very much the same deformity exists, as in the case just mentioned. The crowns of the first teeth should be preserved perfectly sound, and nature allowed to displace them by absorbing the roots.

But they should always be extracted as soon as there is any indication, that the progress of the others is being retarded by their presence.

A few years ago, filling children's teeth was very rare and difficult. Recently, quite a number of materials for filling children's teeth, have been brought into use, and much of the evil effects of neglect, can be averted. Remember this, however, that it is very important to give this attention, before the child begins to suffer with tooth-ache, which is soon to be followed by gum-boils, and chronic abscess, which necessitates the loss of the tooth. *Almost every case of dental deformity*, except those which are congenital, or the result of mechanical violence, are brought about by *neglect or improper treatment*, between the ages of four and ten years. The dentist is

rarely ever consulted, until the child is in an agony of pain, and when there is no alternative, but extraction or a treatment, which brings only temporary relief.

We see then, the importance of proper attention, very early in life, and, since there is so much involved during this period, and so little general information upon the subject, it is important, that the advice of a competent dentist be often consulted. It is also true, that decay nearly always begins early in life, and the intelligent dentist can often foresee the tendency to decay, and by proper and timely attention, or it may be sometimes, by advice, or a suggestion to the parent, prevent the attacks of decay. If the decay has just begun, the treatment is much more simple, more certain in its results, and far less expensive, than if per-

mitted to continue, until actual pain notifies us that the tooth is in danger.

It is almost a fact, that the teeth of every native white American, over twenty-five years of age, have been, more or less affected by caries. Seeing then that dentistry is a necessity, let us secure its benefits, when it pays best, and costs least. As we have before stated, decay once begun, will certainly continue, until arrested by the insertion of an impervious filling.

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Second or Permanent Teeth

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In the Second, or Permanent Set, there are thirty-two teeth, twelve more than in the First. Four of these, often make their appearance, before any of the first teeth are lost: so that if we examine the child's mouth, at five or six years of age, we frequently find twelve, instead of ten teeth in each jaw, as was noticed in the preceeding cut. These new teeth come out behind all the first, and are called the sixth-year molars. They are more liable to decay than any others of the permanent set. Parents, often being under the impression, that they belong to the first set, make no effort to save them, and the child is forced to submit to the extraction of a large permanent

tooth, even, before all of the first set have been lost. When the child is six years old, only take the trouble to count the teeth occasionally, and if there are more than five teeth on either side, know then, that the sixth is a permanent molar, and should be carefully watched to prevent its early loss.

I have been thus explicit upon the subject, because actual experience has shown me that parents are so frequently ignorant or careless in regard to these teeth. If it is from want of information, some who read this paper may thank me for these suggestions. If the neglect has arisen from indifference or thoughtlessness, this plain statement of the results, may lead them to consider the interests of those committed to their charge, and dependent upon them for advice and protection.

Alas! how often do we hear it remarked, that "my parents were careful to supply me with everything which tended to my comfort, but allowed me to neglect my teeth."

Just here, let us notice again, the very erroneous opinion, so prevalent, *i. e.* that teeth need no attention from the dentist so long as they give no pain. Tooth-ache always means disease of the tooth; but, strange to say, tooth-ache does not always mean pain in the *tooth.* It frequently occurs, that the trouble originates in the tooth, while the actual *pain* is referred to some other part of the body. Pain in the ear or neuralgia in the face or head, resulting from a diseased tooth, is quite common. Persons have sometimes imagined themselves afflicted with gout, while the real trouble existed in the neglected tooth. It seems an

anomalism to speak of tooth-ache in the heel, yet, there is a case on record, of a person, who suffered intensely for months, with, what was supposed to be, gout in the heel, until the extraction of the offending tooth, brought immediate relief.

When decay has existed to such an extent, as to be conducive of pain; the tooth is in a very critical condition, and if rescued from the forceps, must be done by very careful, and, often, painful treatment. If tooth-ache is relied upon, as our premonitor, we find that the signal comes only too late, and is soon followed by still greater torture, with gum-boils, abscess, broken crown, loss of the tooth. Pain, therefore, indicates that decay has been existing for months, or it may be years, during which stage, the tooth might have been successfully filled, and horrible

forceps need never have been felt.

We give on the opposite pages, cuts of the Upper and Lower Sets of Permanent, or Adult Teeth.

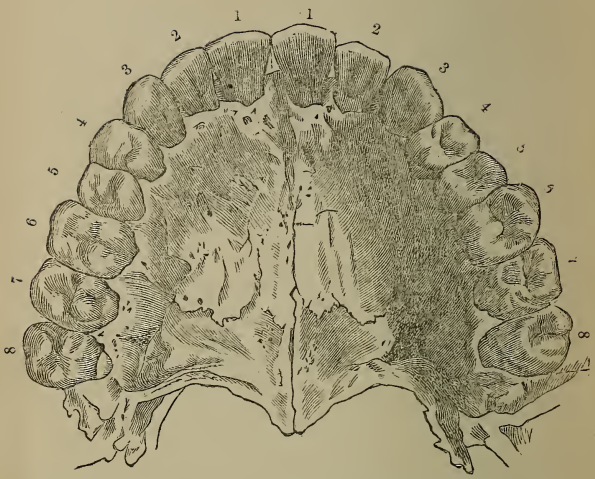
It will be noticed, that the teeth, marked 4 and 5, are called Bicuspids, and occupy the places of molars in the first set.

Figure 3, illustrates the Upper Permanent set.

Figure 4, gives a side view of the Lower Permanent set.

Notice that they do not erupt regularly, from front to rear, but that the first are the large Six-year Molars, and that all four of the Bicuspids are erupted before the Eye teeth. It frequently occurs, that the Eye teeth are very tardy, and before they are ready to take their places, the Bicuspids have so infringed upon the space that the Eye teeth are forced to take a wrong position, and a tusk-like ir-

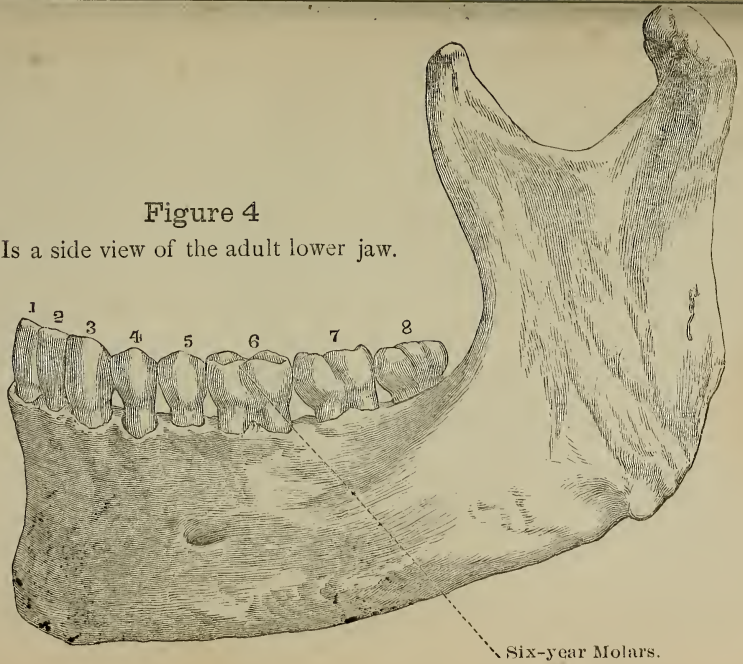
Figure 3.



2 Central Incisors, Nos. 1, in cuts, erupt between the 6th and 8th years.
2 Lateral Incisors, Nos. 2, in cuts, erupt between the 7th and 9th years.
2 Canines, or Eye Teeth, Nos 3, in cuts, erupt between 11th and 12th years.
2 First Bicuspids, Nos. 4, in cuts, erupt between 9th and 10th years.
2 Second Bicuspids, Nos 5, in cuts, erupt between 10th and 11th years.
2 First, or Six-year Molars, Nos. 6, in cuts, erupt between 5th and 6th years.
2 Second Molars, Nos. 7, in cuts, erupt between 12th and 14th years.
2 Third Molars, or Wisom Teeth, Nos. 8, in cuts, erupt between 17th and 25th years.

Figure 4

Is a side view of the adult lower jaw.



regularity is the result. It sometimes, though very rarely, happens that a supernumery tooth disturbs the symmetry of the arch, and should be extracted. The Wisdom teeth are last to be erupted, and vary in time, more than any of the rest. Sometimes, indeed, they never make their appearance. They, not unfrequently, cause serious trouble in making their way through the gum. Sometimes they have to be extracted, as soon as they make their appearance. Occasionally, the Second Molar has to be extracted, in order to make room for the Third.

Third Dentiton.

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SOME very curious freaks of nature have occasionally exhibited themselves, in an effort to produce a Third set of teeth, or to replace one of the Second teeth, when lost. They rarely ever appear, except in very old age, and generally accompanied with return of eye-sight, and other symptoms of returning youth. These conditions are nearly always quickly followed by the death of the subject.

DENTIFRICES.

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We have already referred to the importance of thoroughly cleansing the mouth and teeth. Various kinds of powders, pastes, liquids and combinations, are recommended as sure antidotes to decay. Some of them are valuable, many are worthless, while others are very injurious. Many, strongly acid preparations, claim to, and do whiten the teeth, but it should be remembered, that whatever will bleach them beyond their natural color, is injurious, and if persistently used, will discolor, and soften the enamel. Other preparations claim to be entirely free from acid ingredients, but are just as injurious, because of too strongly al-

kaline properties. Some conain sharp, gritty substances, which scrath the enamel. No one preparation can be recommended as universal. A dentifrice, which would be exactly suited to one person, may be very unsuitable for another. The dentist should prescribe, in each case, just such preparation as the existing conditions indicate. Some mouths require a simple unmedicated powder, others a liquid wash, while others still require a combination of both. A few fortunate ones will find that simple, cold water, together with a brush and tooth-pick, is all that is needed.

The tooth-pick is often more valuable than the brush, because it reaches and removes particles, from points which are most liable to decay: while the brush, unless very carefully used, only polishes the exposed sur-

faces, which are not liable to attacks.

The too free use of charcoal, no matter how finely pulverised, is sure to result in injury to the gums. It insinuates itself under the margins, and causes the gums to recede from the necks of the teeth. An ugly blue line, is also deposited upon the edges of the gums, which cannot be removed. All gritty substances should be avoided.

Extraction of Teeth.

As a rule, all broken roots, or decayed teeth, which cannot be properly filled, or teeth which, from any cause, act as irritants, should be extracted. Such teeth, allowed to remain in the mouth, poison the breath, vitiate the fluids of the mouth, injure the other teeth, and impair the general health. A diseased tooth in the lower jaw, is liable to form a fistulous opening on the out side of the face, which, even after being healed, leaves an ugly, cicatrized, puckered depression, which is a life-long mark. Deep-seated abscess in the upper jaw, resulting from diseased roots, is still more serious, as it is liable to penetrate

the thin bone, below the eye, and produce the much dreaded disease of the antrum. This disease is very stealthy in its approach, and when it becomes chronic, is very difficult to treat.

The sharp edge of a projecting root, or broken crown, is, probably, the most fruitful cause of cancer of the tongue or mouth. The simple announcement of this fact should be sufficient warning against any neglect which could possibly be followed by such frightfully fatal results.

Any number of cases might be cited, of persons whose health had been seriously impaired by the presence of diseased teeth, and the same entirely restored by the removal of the offenders.

ARTIFICIAL TEETH.

"Ars est celare artem."

ARTIFICIAL teeth are, truly, a great comfort, and when the natural ones are lost, they become a necessity. This necessity is quite evident, when several, or all of the natural teeth have been lost Both health and features demand their replacement; but the fact is too often overlooked, that the absence of a single tooth, frequently causes the distortion of the arch, and also, injury to other teeth.

Whenever a tooth is lost, the adjoining teeth, gradually move toward each other, and attempt to close the

space. Sometimes, the absence of a tooth, as far back, even, as the second bicuspid, induces all the front teeth to be moved towards the space, and the median line is destroyed. If the loss occurs near the front, when the person is quite young, the lateral distortion amounts to a real deformity. The space should be promptly occupied by an artificial tooth, or the lateral tendency counteracted by removing the corresponding tooth, on the opposite side. Remember, still further, that when teeth are not subjected to the pressure of mastication; their tendency is to become loosened and diseased. Thus, when a tooth in one jaw, has lost its antagonist from the other jaw, so that food cannot be pressed against it, the sockets around the roots of this tooth, gradually fill up, causing the

tooth to rise beyond the rest, and it becomes irritable and tender.

Any number of teeth, from one, to a full upper and lower set, may be inserted with almost perfect satisfaction. And we are prepared now, to appreciate the importance of prompt replacement. A very eminent professor of dental science, says that "contributing, as the teeth do, to the beauty and expression of the countenance, to correct enunciation, and, through improved facility, of mastication, to the health of the whole organism, it is not surprising that their loss should be considered a serious affliction, and that art should be called upon to replace such loss with artificial substitutes. So great, indeed, is the liability of the human teeth to decay, and so much neglected are the means of their preservation, that few persons at the

present day, reach even adult age, without losing one or more of these valuable organs."

Fortunately for us, however, the art of substitution has reached such perfection, that artificial teeth, either partial or whole sets, may be worn with entire comfort, and are not detected as being the product of man's skill. It is true, that hideous imitations often appear, as ghosts of the real; but these are worthy, only of the unskilled and uneducated practitoners, who bring reproach upon the art.

A very common defect in the artifical dentures is their abstract perfection, of shape and color, without reference to the age, complexion or features of the person whose organs are to be replaced. We sometimes see a face, with features regular and well formed; yet all admit that there

is some irreconcilable incongruity, which is not pleasing. Even the teeth themselves, may be called "pretty." No one may suspect them of being the cause of the effect, and yet, it has all been the result of a want of æsthetic skill, on the part of the artist. We say artist, because, every prosthetic dentist must, of necessity, be truly an artist. And it is only after long experience, and careful study of facial expression, that he is enabled to so shape and arrange the teeth, as to produce that pleasing harmony of features which nature demands. Imitation of nature is too often disregarded, and the dentist allows himself to be controlled by the wish of the patient, who almost invariably demands, that the teeth shall be perfectly regular, and of pearly whiteness. His own sense of æsthetic fitness, should determine

the arrangement, shape and color of the teeth to be used. But, unfortunately, a very large class of dental practitioners, possess little or no such knowledge, and the patient is forced to wear just such dentures, as happen to be in stock, or, what is no better, a set style is adopted, and every applicant is supplied with, as it were, a cast from the same moulds. They may be perfect models of workmanship, and at the same time, utterly fail in supplying the demands of the case. The dentist's business, his "art is to conceal the art;" and he fails to honor his profession, when he allows his productions to exhibit an unnatural appearance. In this country, a perfect denture is so rarely a gift of nature, that the fortunate owner thereof is, we repeat, apt to be accused of wearing an artifiicial set. So then, instead of imitating nature,

in its perfect state, we must use additional artifice, in order to make the deception a success. This can be done by deviating a little from an absolutely perfect arrangement, or, by inserting a gold filling in one or more of the artificial teeth.

CLEFT PALATE.

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It may not be improper, just here, to remind the reader that the teeth are not the only tissues of the mouth, which the dentist is called upon to replace. Defects in the palatine organs, sometimes exist to such an extent, as to make articulation almost impossible, while mastication and deglutition are very difficult. Until the year 1864, tho appliances for the relief of this defect, were very crude and ineffectual. Since that time, new materials, together with great ingenuity and skill, have contributed very largely to the comfort of very many, who had suffered either from congenital or accidental defects. Together with the operation of staphyloraphy, (uniting of cleft palate by means of sutures)

it is often necessary, to use appliances and material, with which, none but the dental surgeon is familiar. The proper construction and adjustment of such appliances requires a most accurate knowledge of the anatomy and functions of the parts to be repaired. But a description of the parts affected, or the process of repair, would be neither interesting nor profitable to the general reader.

Dental Ethnography
AND
Dentonomy.

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THUS far, the author has attempted to condense into a few pages, such information as he considers of practical interest and importance. To those who have been kind enough to follow him, he begs leave to submit a few thoughts upon the subject of Dental Ethnography. And while describing the teeth of different nations and families, we will find a most interesting development of a science, which we will term Dentonomy. But, since we have promised to discard, as far as possible, all technical terms; we will state, that, by Dentonomy, we mean a classification of the teeth according to their physiognomical

characters, and their physiological indications. Or, if this does not better the technology; we will simplify, by saying, that the teeth, by their size, shape, color, consistency and general arrangement in the arch, indicate certain innate constitutions, or susceptibility to certain diseases, as well as the character and disposition of the individual.

If, in our researches, we find ourselves comparing the teeth of brutes, with those of the human species; we need not be accused of adopting the Darwinian theory of Humanized Monkeys; yet we will find, that the teeth of animals, whether monkeys, men or reptiles, are an index to their natural propensities. So well understood is this fact, that, by an examination of the teeth, the naturalist can readily determine the class, to which any animal belongs: whether

it feeds upon herbs or flesh; whether voracious or careful eaters; whether it chews its food, or uses its teeth only to apprehend and hold its prey, to be swallowed without being masticated.

The subject of Dentonomy, or Dental Physiognomy, will, doubtless be new to many of our readers, and some will be skeptical, as to the truth of its propositions.

As the different classes of animals have their peculiar characteristics exhibited upon their teeth: so, also, the various species of these classes have their distinguishing peculiarities designated in the same way.

After observing the nature, habits and dispositions of the animals possessing the various forms of teeth; it will be seen, that, where there is a blending of these forms, there will, also, be a blending of character and

habit. In lieu of these facts, it is evident, that, from an intelligent examination of the teeth of any animal, we may derive very important information.

This brings us now, to the examination of the teeth of human beings. In making this examination, it must be remembered, that the habits and mode of life of the highly cultivated American people, are artifiicial to such an extent, that, in order to reach the true basis of our theory, we must first examine the nationalities, or the people "en-masse," in certain localities, where there is little variety or complexity of character or disease. After acquainting ourselves with the mode of life, habits, features and general customs, together with their prominent mental characteristics, as differing from other nations; we may then note the general ap-

pearance of their teeth, such as form, color, size, density, sensibility, position in the arch, articulation and liability to decay. Hence, we associate these peculiar natural characteristics of mind and body, with the peculiar class of teeth, which we found them to possess. When we examine the teeth of individuals, we will find that, as they resemble a certain national type: so will we find associated with them, the prominent mental and physical peculiarities of that nation. But, while the subject before us is full of interest to the author, and might be to a few of our readers, its full discussion involves too much of histogenesis for our prescribed limits, and more study of the sciences, connected with it, than the general reader is willing to exercise.

(1st.) The native Scotchman, and

the middle classes of England, give us the best type of teeth, though, not that which the seekers of beauty deem the prettiest. They are of medium size, rather short, have thick square cutting edges, and yellowish color, indicative of great strength and density. They belong to the class which we term sanquineous, and indicate a naturally strong constitution, with such perfect digestion and freedom from dyspepsia, as enables a good-humored Englishman (we are told) with the aid of sufficient quantity of port wine, and an occasional hearty laugh, to dispatch a whole ox at a single repast, and suffer no unpleasant effects. Not generally a brilliant intellect, but honesty and candor, with temper without rashness, characterize the possessors of these teeth. The mind is hopeful and elastic, yet often desirous of

something which it is not willing to make the necessary effort to obtain. The luxuriant hair is apt to be yellowish, red or brown, with a tendency to curl. If, however, the person happens to be a *fashionable* young lady; the hair is at once a *beautiful auburn* or *golden* color!! Eyes sometimes light, sometimes dark, but generally hazel brown. The complexion is fair, but ruddy, veins full, pulse active, giving warm extremities. Every feature gives evidence of perfect health. The muscles are well developed, angles of the body well turned, and graceful. This constitution, this temperament, and this class of teeth constitute perfection of health: and, occasionally, combine to make up what we term a very handsome man, or a very beautiful woman.

(2nd.) The second class of teeth,

which we shall describe, is called the Lymphatic, because they are characteristic of the temperament so named, They are very liable to disease, and often fall irretrievable victims of decay, before its presence is suspected. The decay is usually of the white variety, and a large portion of the tooth may suddenly crumble, while the structure *seemed* to be perfectly healthy. Their color is a faint azure blue, They are rather long, especially the upper central incisors. which are also thin and narrow. The laterals are small. The Eye teeth are small and pointed. The bicuspids and molars are small, and have very prominent cusps. They are apt to be very sensitive under the dentist's hand. The utmost cleanliness and care are necessary, in order to render them durable. With these teeth, we

are apt to find fair complexion; hair sometimes dark, sometimes light, and generally thin and straight; eyes are light, usually blue. The skin is thin, and muscles soft; the body heavy and rounded, sometimes burdensome, while sometimes the figure is handsome, with the exception of slight curvature of spine between the shoulders.

There is an expression of inactivity upon the face; but prudence and sound judgment accompany an active and well balanced mind.

(3rd.) Another class of teeth, are of an opaqe, muddy color. They are always soft, and generally large, describing a large, broad arch. They indicate a dull, indolent mind, indifferent to the pleasures or duties of life.

(4th.) We will notice now, the teeth which always attract attention,

and are admired for their perfection of shape and arrangement, as well as their polished, glossy whiteness. Instead of the broad, square cutting edges of the first class mentioned; they are slightly oval, with corners well turned. They are sometimes in the mouths of blondes; but the features generally accompanying them, are dark eyes, hair, not black, but dark, fine and glossy; forehead high and rounded; brows well arched, not very thick. The complexion is good without ruddiness. All the features are smooth and well turned, but generally, there is want of expression. The person is generally rather under medium size, but good figure. Persons, of the temperament here indicated, are generally fond of gayety and excitement. They have good minds; but there is want of application. Duties are apt to

be neglected when pleasure is offered. Procrastination is their weak point; yet they are not often troubled with remorse.

The jaw teeth are more liable to decay, than those in front, and so long as the anterior teeth are so perfectly smooth and healthy, their owners are apt to conclude that the others need no attention, until serious damage has resulted. The author has, sometimes, been called upon to examine teeth of this class, and found it necessary to insert a dozen or more fillings, in the posterior teeth, while those in front were smooth and glossy; the patient having no suspicion of such a condition. Outward appearances are often very deceptive. This is particularly true with reference to the 5th class of teeth. They are found associated with a temperament, something like

the last described, but having more spirit and vivacity. The complexion is transparent, rosy and blushing. These persons have warmth of feeling, are sympathetic and affectionate, but dependent, and wanting in power of protracted endurance. Persons of the diathesis, here indicated, retain their teeth and freshness of beauty, only by prudence, and frequent outdoor exercise. Their teeth often retain their perfection until the age of eighteen or twenty-five, when a sudden reverse in health, brings them to rapid ruin, the rear teeth beginning first. These teeth have, all the while, though beautiful in appearance, borne a peculiar tint and shape, which the experienced dentist has recognized as prognostic of just such a casualty.

It is unneccessary for our purposes here, to mention other classes

involving a description of particular teeth, their position, articulation &c., pointing to physical or mental peculiarities. This, however, we will mention, since it may be easily noticed : that when we find the cutting edges of the upper and lower front teeth closing, in direct contact; we may expect to find in the person, great courage, independence, and sternness of purpose. When a street waif, or a school-boy would impress his antagonist, with his courage and readiness to defend himself, he instinctively protrudes his lower jaw, and grates his front teeth against each other, in brave defiance.

This peculiarity does not indicate an irritable or belligerous disposition but rather will-force, and readiness to repel. We are most apt to find it in sanguine and choleric temperaments.

Idiots, almost invariably, have their

misfortune registered upon their teeth.

The teeth, together with the tartar accumulations, furnish to the observant dentist, and physician, very valuable pathognomics, which could be derived from no other source. Insidious consumption is sometimes portrayed upon the teeth, when every other condition would deceive us.

We have thought proper, thus to refer to the characteristics of the natural teeth: in order to show, that the proper insertion of artificial substitues involves far more than simple mechanical skill. As, in the treatment of the natural teeth, and soft parts of the mouth, it is necessary to bring to bear, the skill of the surgeon, aided by the knowledge of the physician; so must the mechanism of the prosthetic department be directed, by the æsthetic taste of the true artist.

CURIOUS CUSTOMS.

It may not be altogether uninteresting to notice, in this connection, some very curious customs which prevail in regard to teeth among some nations, very remote from us, in point of civilization, and note the striking contrast between our ideas of æsthetic beauty, and that displayed by their singular, and often barbarous practices. We are all familiar with the tattooing custom of the South-sea Islanders, who carve and paint themselves, particularly their faces, with all sorts of horrid figures. The North American Indians, also, make themselves frightful, with deep gashes upon their breasts and faces. The native Africans admire large lips; hence they submit to deep incisions into

their upper lip, and then insert a gold ring, which turns over the nose whenever the beauty (?) smiles. The ornamentations and abuses, to which the *teeth* are subjected are probably less familiar to most of us.

The gold, found upon the teeth of Egyptian mummies, is not a gold filling applied to arrest decay, as is sometimes stated; but, only a thin foil, pasted upon the sound enamel for ornament, and is easily scraped off with an instrument. We find, however, that gold was used for filling teeth, probably two thousand years ago. Ovid and Horace, Latin historians, who wrote before the Christian Era, refer to the treatment of decayed teeth, by filling the cavities with gold and other materials. Whether the true principle of its efficiency was understood, we do not know. Since that time, we have no

record of its use as a filling until the eighteenth century. Some writers say, in the early part of the eighteenth, but we have not been able to find any record of such use, until the year 1775. It may, however, have been used to a very limited extent before this time. It was first used in America, by Mr. Robert Wolfendale, who returned to New York from England in the year 1795.

The inhabitants of some of the East India Islands, gild their two upper front teeth, and stain the others black, while some of the great men of the Island of Sumatra, cover the lower teeth with gold, and blacken the upper ones. They are fond of exhibiting this contrast, at night, by candle light. Their women have the enamel roughened or filed off, so as to dye them black. This they consider quite ornamental. Others

have their teeth filed off even with their gums. The inhabitants of Tonquin and Siam dye their teeth black, as, also, do the women of the Marian Islands. In Java, the unmarried women ornament themselves in the same hideous manner The people of Prince William's Sound, make an incision in the upper lip, as do the Africans; but, insert instead of of a gold ring, a shell, carved in imitation of teeth. We can imagine nothing more repulsive. The Sandwich Islanders, in their degrading worship of their God, Eatooa, have their front teeth extracted, and imagine that their deity is pleased with the sacrifice. The Hindoostan Brahmins pray to the sun an hour or two every morning, while rubbing their teeth with the twig of the fig-tree. They also file the teeth apart, leaving wide spaces between them.

In Malacca, the people cut deep grooves across their front teeth The Abysinian Negroes file their teeth to points, giving them a serrated or saw-like appearanee.

These barbarous, and semi-civilized people have naturally good teeth. They can afford to abuse and mutilate them, becuse their religion and their fashions demand it. We, recognising man as nature's best production, demand a perfect type. Let us see to it then, that no part of nature's model shall suffer injury or loss through any neglect of ours. We owe it to ourselves, and to our Creator, to protect our bodies from disease; and yet, how often do we find ourselves sufferers, in consequence of disobedience to nature's *first law.*


Disease is dangerous—Neglect is fatal.

SUMMARY and RULES

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1. FREEDOM FROM PAIN does not prove the absence of disease. Both decay and tartar, often make fearful ravages, before their presence is intimated by the slightest pain.

2. SINCE THE POINTS MOST liable to decay are not easily seen; it is important, that the teeth should be submitted to a competent dentist for thorough examination, at least, once or twice a year.

3. TEETH ARE RARELY ever able to resist the evil tendency of corrosive agents which are always present in *neglected mouths*.

4. TEETH POSSESS NO VITAL force which enables them to replace lost tissue; hence, the necessty of filling, as soon as the decay is detected.

5. FILLING REPLACES LOST tissue, and prevents further decay.

6. THE USE OF DENTIFRICE and brush is to prevent the *beginning* of decay.

7. NEVER ALLOW PARTICLES of food to remain between the teeth after eating.

8. TEETH SHOULD BE brushed at least twice a day: morning and night.

9. GENERALLY, THE BEST dentifrice to be used, is the simplest; but the safest plan, is to consult your dentist, who should be prepared to prescribe such treatment, as will meet the demands of the case

10. AVOID ALL NOSTRUMS, claiming to bleach the teeth.

11. NO ONE PREPARATION

can be used, indiscriminately; yet that which comes nearest to universal adaptability.is a slightly detergent liquid, in combination with a finely pulverized powder.

12. THE USE OF A TOOTH powder is to *rub off* such foreign particles, as may tend to irritate the gums or corrode the teeth. The use of a liquid mouth wash, is to purify the mouth by correcting, any objectionable condition, which may exist, in consequence of medicines used, or particles of food remaining between the teeth, or vitiated condition of the fluids of the mouth. The nature and strength of the liquid is to be determined by the existing conditions

13. RINSE THE MOUTH thoroughly with clear water, before using dentifrice or wash.

14. IF THE BREATH IS IMpure, or there is nauseating taste in the mouth; your dentist can generally correct the troub'e, after learning the cause.